

DETAILED ACTION

1. This action replaces the previous action dated 12/23/2008, due to an inadvertent typo on secondary reference number. The previous action should be disregarded.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/27/2008 has been entered.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. claims 18-20 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled "Clarification of Processes" under 35 U.S.C. 101"). The instant claims

neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 10-14 and 18-21 is rejected under 35 U.S.C. 102(e) as being anticipated by Raman et al. (US Patent No. 6,910,078).

Regarding claim 1, (currently amended) Raman et al. teach a system, comprising:

a first master device generating a first data stream (Fig. 1, element 120 generating 170-A stream data);

a second master device generating a second data stream (Fig. 1, element 122 generating 170-B new stream data), the first and second master devices being independent (Fig. 1);

a redundancy manager coupled to the first and second master devices (Fig. 1, element 110); and

a slave device coupled to the redundancy manager (Fig. 1, element 130 connected to the element 110 through network 105),

wherein the redundancy manager is operable to receive the first data stream from the first master device (Fig. 1, 170-A stream data received by the element 110) and the second data stream from the second master device (Fig. 1, 170-B stream data received by element 110), and

wherein the redundancy manager is operable to selectively forward one of the first and second data streams to the slave device (Fig. 1 and Fig. 3. Column 15, lines 33-39).

Regarding claim 2, (original) Raman et al. teach the system of claim 1 wherein the first and second master devices comprise computers that are not configured to share data associated with the slave device directly with each other (Column 10, lines 1-29 discloses the selection that is done in the selector and based on the information such as timing or position provided to the selector. Also, servers are computers as well).

Regarding claim 3, (original) Raman et al. teach the system of claim 1 wherein the first and second master devices are in different locations such that a user having access to the first master device is not able to simultaneously access the second master device and vice versa (Column 1, lines 6-30 discloses a user having access the streaming servers and according to column 10, lines 1-29, the access is granted to one of the servers before the Second server can get access. Also, according to Fig. 1, the servers are separate from each other and can be located in different location).

Regarding claim 10, (currently amended) Raman et al. teach a redundancy manager device for providing redundant data communication to a slave device, the redundancy manager device comprising:

a first processor (Fig. 3, element 150); and
a switching mechanism coupled to the first processor (Fig. 3, element 157),
wherein the switching mechanism is configured to receive a first data stream associated with a first master device and a second data stream associated with a second master device (Fig. 3, link 111 provides the first and the second stream to element 150 and element 157),

wherein the switching mechanism is configured to implement a default configuration that forwards one of the first and second data streams to the slave device (Column 15, lines 33-39),

wherein the first processor is configured to provide a switch control signal that causes the switching mechanism to switch between forwarding the first data stream and forwarding the second data stream (Claim 15),

wherein the first processor asserts and de-asserts the switch control signal in response to a determination of first and second data stream integrity and mastership transfer commands associated with the first and second master devices (Column 16, lines 33-54 discloses updating the stream based on the adjustment which can be interpreted as asserting and de-asserting).

Regarding claim 11, (currently amended) Raman et al. teach the redundancy manager device of claim 10 further comprising a second processor (Fig. 3, element

112), wherein the second processor is configured to determine the second data stream integrity (Column 13, lines 9-19 and also, see Fig. 2) and assert a health signal to the first processor when the second data stream is invalid (Column 13, lines 9-19 the inherent signal is sent to the processor indicating the integrity of the second data stream, and also, column 12, lines 2-18 discloses the heartbeat signal. see Fig. 2).

Regarding claim 12, (original) Raman et al. teach the redundancy manager device of claim 11 wherein the second processor (Fig. 3, element 112) is further configured to assert a first mastership transfer signal to the first processor in response to a mastership transfer command associated with transferring mastership from the first master device to the second master device (Column 7, lines 53-60, column13, lines 38-67 and column 14, lines 1-17).

Regarding claim 13, (original) Raman et al. teach the redundancy manager device of claim 12 wherein the second processor is further configured to assert a second mastership transfer signal to the first processor in response to a mastership transfer command associated with transferring mastership from the second master device to the first master device (Column 13, lines 9-19 the inherent signal is sent to the processor indicating the integrity of the second data stream, and also, see Fig. 2).

Regarding claim 14, (original) Raman et al. teach the redundancy manager device of claim 13 wherein the first processor is configured to determine if the first data stream is invalid and to periodically determine an assertion state of the health signal, first mastership transfer signal, and the second mastership transfer signal (Column 12, lines 2-18 discloses the heartbeat signal).

Regarding claim 18, (currently amended) Raman et al. teach a method, comprising:

receiving a plurality of data streams (Fig. 3, element 130 receives First and Second stream of data); and

forwarding one of the data streams according to a prioritization of data stream validity estimates (Fig. 3, element 110 forwards the stream to element 130 based on the validity), requests to forward a particular data stream (Fig. 3, element 110 forwards the particular stream to element 130 based on the validity), and a switch-based timing threshold (Column 6, lines 13-32).

Regarding claim 19, (original) Raman et al. teach the method of claim 18 further comprising cycling between forwarding the data streams if a determination is made that none of the data streams are valid (Column 13, lines 9-18 discloses a cycle of the both data streams are not valid).

Regarding claim 20, (original) Raman et al. teach the method of claim 19 further comprising detecting when a data stream becomes valid and setting a relay to forward the valid data stream (Column 13, lines 9-18 discloses a cycle of the both data streams are not valid and when a server is capable of serving data stream).

Regarding claim 21, (original) Raman et al. teach the method of claim 20 further comprising upon receiving a request to forward a particular data stream determining if the particular data stream is associated with a healthy master device (Column 12, lines 2-18 discloses the heartbeat signal. Also, Column 13, lines 9-19).

Claim 22, (cancelled)

Claim 23, (cancelled)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al. in view of Fontana et al. (US Patent No. 6,116,345).

Regarding claim 4, (original) Raman et al. teach the system of claim 1, but fail to teach the system wherein the slave device comprises a subsea tool. However, Fontana et al. teach the system wherein the slave device comprises a subsea tool (Column 9, lines 28-30 and also, Fig. 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Raman et al. to include the subsea mechanism taught by Fontana et al. in order to communicate with the subsea level slave device and exchange information from bottom of the sea.

Regarding claim 24, (currently amended) Raman et al. teach a system, comprising:

a first master device (Fig. 1, element 120 generating 170-A stream data);
a second master device (Fig. 1, element 122 generating 170-B new stream data);
means for controlling (Fig. 3, element 150) coupled to means for switching
mastership (Fig. 3, element 157), wherein the means for controlling asserts and de-

asserts a signal to control the means for switching mastership based on requests originating from an active master device and requests originating from an idle master device (Column 16, lines 33-54 discloses updating the stream based on the adjustment which can be interpreted as asserting and de-asserting); and

means for switching mastership of the slave device between the master devices and the slave device (Fig. 3, element 110 switches between master devices),

the slave device responsive to commands received from the first and second master devices (Column 7, lines 53-60, column13, lines 38-67 and column 14, lines 1-17), but fail to teach the slave device as a subsea tool.

However, Fontana et al. teach the slave device as a subsea tool (Column 9, lines 28-30 and also, Fig. 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Raman et al. to include the subsea mechanism taught by Fontana et al. in order to communicate with the subsea level slave device and exchange information from bottom of the sea.

Regarding claim 25, (previously presented) Raman et al. teach in view of Fontana et al. teach the system of claim 24 Raman et al. further teach the system wherein the means for controlling further controls the means for switching mastership based on a validity estimation of the data streams from the first and second master devices and timing considerations (Column 10, lines 1-29 discloses the selection that is done in the selector and based on the information such as timing or position provided to the selector. Also, servers are computers as well).

Regarding claim 26, (currently amended) Raman et al. teach in view of Fontana et al. teach the system of claim 24 Raman et al. further teach the system wherein the first and second master devices are configured to send requests to transfer mastership in response to user input and at least one of data content received from the slave device (Fig. 3, requests 180 and also see column 14, lines 31-67 and column 15, lines 31-45) and a lack of data received from the subsea tool, and Fontana et al. further teach the slave device that as the subsea tool (Column 9, lines 28-30 and also, Fig. 7).

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raman et al. teach in view of Keck et al. (US Patent Publication No. 2002/0101888) and further in view of Fontana et al. (US Patent No. 6,116,345).

Regarding claim 28, (currently amended) Raman et al. teach the system of claim 1 but fail to teach the system wherein both of the first and second master devices are configured to simultaneously monitor a data stream from the subsea tool. However, Keck et al. teach the system wherein both of the first and second master devices are configured to simultaneously monitor a data stream from the device (Paragraph [0038]) but fail to teach that the device is a subsea tool. However, Fontana et al. teach the device as a subsea tool (Column 9, lines 28-30 and also, Fig. 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Raman et al. to include the monitoring feature for the stream servers taught by Keck et al. in order to increase the quality of service and reduce delays in the communication system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Raman et al. in view of Keck et al. to include the subsea mechanism taught by Fontana et al. in order to communicate with the subsea level slave device and exchange information from bottom of the sea.

Allowable Subject Matter

10. Claims 5, 6, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 7, 15, 16, 17, and 27 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior arts on the record fail to teach a system wherein the timing considerations prevent switching back and forth between forwarding the first data stream and the second data stream if less than a threshold amount of time has passed; and a redundancy manager wherein the first processor is configured to periodically assert a reset signal to the second processor whereby the second processor resets the health signal, the first mastership transfer signal, and the second mastership transfer signal, in combination with other limitation disclosed in the respective claims.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIMA MAHMOUDZADEH whose telephone number is (571)270-3527. The examiner can normally be reached on Monday - Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on (571) 272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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